	Application No.	Applicant(s)
Notice of Allowability	10/820,347	HALL ET AL.
	Examiner	Art Unit
	KABIR A. TIMORY	2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *11/26/2010*.

2. ☒ The allowed claim(s) is/are *1-7, 13-20, and 26-31*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

     * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413),
    Paper No./Mail Date *1/19/2011* .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

/Kabir A Timory/
Examiner, Art Unit 2611

DETAILED ACTION

1.   Acknowledgement is made of the amendment received on 11/26/2010.

EXAMINER'S AMENDMENT

2.   An examiner's amendment to the record appears below. Should the changes
and/or additions be unacceptable to applicant, an amendment may be filed as provided
by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be
submitted no later than the payment of the issue fee.

      Authorization for this examiner's amendment was given in a telephonic interview
with Robert J. Mauri (Reg. No. 41180) on January 19, 2011.

      The claims in the application have been amended as follows:

      In claims:

      (1) Replace claim 1 with:

      A method to operate a digital signal receiver, comprising:

      detecting occurrence of a symbol degrading event for a received signal, wherein

            the symbol degrading event occurs after transmission and before

            reception of the received signal, wherein detecting further comprises:

multiplexing a received symbol stream by a multiplexor and outputting a

block of L contiguous parallel symbols to a signal to noise ratio

(SNR) estimator, where L is an integer greater than or equal to one;

estimating a SNR of the block of L contiguous parallel symbols;

comparing the estimated SNR to a threshold SNR value;

applying a comparison result as a control signal and a delayed received

symbol stream to a symbol multiplexor; and

providing an output of the symbol multiplexor for error correction decoding;

inserting zero symbols into the received symbol stream to replace symbols

degraded by the signal degrading event prior to de-interleaving the

received signal, wherein inserting further comprises replacing by the

symbol multiplexor the block of L contiguous parallel symbols with L zero

symbols in response to the estimated SNR being less than the threshold

SNR value; and

performing the error correction decoding of the received symbol stream having

the inserted zero symbols.

(2) Cancel claims 8-12.

(3) Replace claim 14 with:

A digital signal receiver, comprising:

circuitry configured to detect the occurrence of a symbol degrading event for a

         received signal, the circuitry configured to detect comprising a multiplexor,

         a signal to noise ratio (SNR) estimator, a comparator, a delay circuit, and

         a symbol multiplexor, the multiplexor configured to multiplex a received

         symbol stream and output a block of L contiguous parallel symbols to the

         SNR estimator, where L is an integer greater than or equal to one, the

         SNR estimator configured to estimate the SNR of the block of L

         contiguous parallel symbols, the comparator configured to compare the

         estimated SNR to a threshold SNR value, the comparator and the delay

         circuit configured to apply a comparison result as a control signal and a

         delayed received symbol stream to the symbol multiplexor, and the

         circuitry configured to detect further configured to provide an output of the

         symbol multiplexor to a decoder; and

circuitry configured to insert zero symbols into the received symbol stream to

         replace symbols by the symbol degrading event prior to de-interleaving

         the received signal, wherein the symbol degrading event occurs after

         transmission and before reception of the received signal, and wherein the

         circuitry configured to insert zero symbols comprises the symbol

         multiplexor configured to replace the block of L contiguous parallel

symbols with L zero symbols in response to the estimated SNR being less

than the threshold SNR value; and

the decoder configured to decode the received symbol stream having the

inserted zero symbols.

(4) Cancel claims 21-25.

(5) Replace claim 27 with:

A method to receive a signal that passes through a channel that is periodically

obstructed by a rotating propeller blade, comprising:

detecting occurrence of a fading condition due to obstruction by the propeller

blade, wherein detecting further comprises:

multiplexing a received symbol stream by a multiplexor and outputting a

block of L contiguous parallel symbols to a signal to noise ratio

(SNR) estimator, where L is an integer greater than or equal to one;

estimating a SNR of the block of L contiguous parallel symbols;

comparing the estimated SNR to a threshold SNR value;

applying a comparison result as a control signal and a delayed received

symbol stream to a symbol multiplexor; and

        providing an output of the symbol multiplexor for the de-interleaving;

in response to detecting the occurrence of the fading condition, inserting zero

        symbols into the received symbol stream at the receiver to replace

        symbols degraded by the fading condition caused by the obstructing

        propeller blade, wherein inserting further comprises replacing by the

        symbol multiplexor the block of L contiguous parallel symbols with L zero

        symbols in response to the estimated SNR being less than the threshold

        SNR value;

de-interleaving the received symbol stream having the inserted zero symbols;

        and

decoding the received symbol stream having the inserted zero symbols.

(6) Replace claim 30 with:

A method to operate a satellite to receive a signal that passes through a channel

that is periodically obstructed by a rotating propeller blade, comprising:

    detecting, on the satellite, occurrence of a fading condition due to obstruction by

        the propeller blade, wherein detecting further comprises:

        multiplexing a received symbol stream by a multiplexor and outputting a

            block of L contiguous parallel symbols to a signal to noise ratio

            (SNR) estimator, where L is an integer greater than or equal to one;

estimating a SNR of the block of L contiguous parallel symbols;

comparing the estimated SNR to a threshold SNR value;

applying a comparison result as a control signal and a delayed received
symbol stream to a symbol multiplexor; and

providing an output of the symbol multiplexor for de-interleaving;

in response to detecting the occurrence of the fading condition,

inserting zero symbols into the received symbol stream at the satellite to replace
symbols degraded by the fading condition caused by the obstructing
propeller blade, wherein inserting further comprises replacing by the
symbol multiplexor the block of L contiguous parallel symbols with L zero
symbols in response to the estimated SNR being less than the threshold
SNR value;

de-interleaving the received symbol stream having the inserted zero symbols;
and

error correction decoding the received symbol stream having the inserted zero
symbols.

(7) Replace claim 31 with:

A satellite, comprising:

a receiver for receiving a signal that passes through a channel that is periodically obstructed, the receiver comprising:

circuitry configured to detect occurrence of a fading condition due to an obstruction, the circuitry configured to detect comprising a multiplexor, a signal to noise ratio (SNR) estimator, a comparator, a delay circuit, and a symbol multiplexor, the multiplexor configured to multiplex a received symbol stream and output a block of L contiguous parallel symbols to the SNR estimator, where L is an integer greater than or equal to one, the SNR estimator configured to estimate the SNR of the block of L contiguous parallel symbols, the comparator configured to compare the estimated SNR to a threshold SNR value, the comparator and delay circuit configured to apply a comparison result as a control signal and a delayed received symbol stream to the symbol multiplexor, and the circuitry configured to detect further configured to provide an output of the symbol multiplexor to an error correction decoder;

circuitry configured, in response to detecting the occurrence of the fading condition, to insert zero symbols into the received symbol stream to replace symbols corrupted by the fading condition caused by the periodic obstruction, and wherein the circuitry configured to insert zero symbols

comprises the symbol multiplexor configured to replace the block of L

contiguous parallel symbols with L zero symbols in response to the

estimated SNR being less than the threshold SNR value; and

the error correction decoder configured to decode the received symbol stream

having the inserted zero symbols.

Allowable Subject Matter

3.   Claims 1-7, 13-20, 26-31 are allowed.

4.   The following is a statement of reasons for allowable subject matter:

The prior art of record, Ling et al. does not teach or suggest multiplexing a

received symbol stream by a multiplexor and outputting a block of L contiguous parallel

symbols to a signal to noise ratio (SNR) estimator, where L is an integer greater than or

equal to one; estimating a SNR of the block of L contiguous parallel symbols; comparing

the estimated SNR to a threshold SNR value; applying a comparison result as a control

signal and a delayed received symbol stream to a symbol multiplexor.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kabir A. Timory whose telephone number is 571-270-

1674. The examiner can normally be reached on 6:30 AM - 3:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kabir A Timory/

Examiner, Art Unit 2611

/Shuwang Liu/

Supervisory Patent Examiner, Art Unit 2611